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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,419	12/21/2001	Joseph Vanniasinkam	M-9340 US	3557

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EXAMINER	
KIANNI, KAVEH C	

ART UNIT	PAPER NUMBER
2883	

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/028,419	VANNIASINKAM ET AL.	
	Examiner	Art Unit	
	Kianni C. Kaveh	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2006 and 22 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

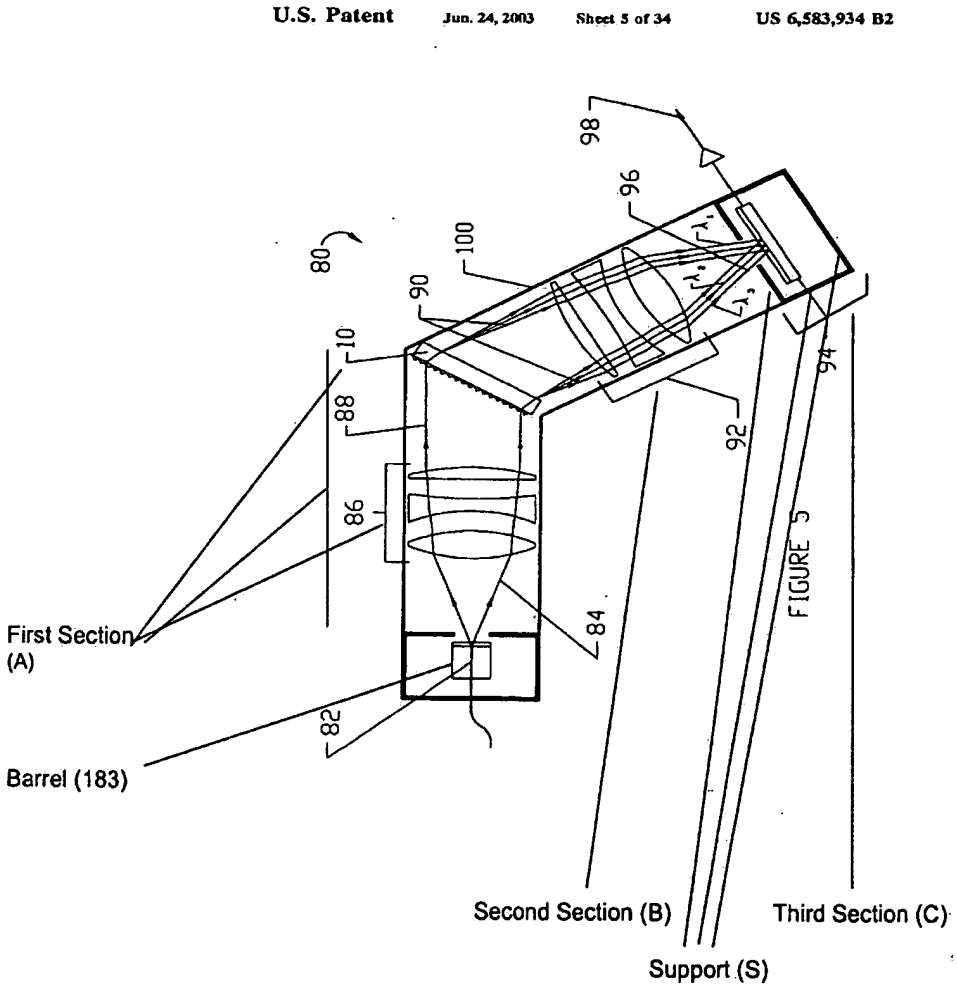
1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

- This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).



Claims 1-15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer (US 6583934).

Regarding claims 1-6 and 12-13, Kramer teaches a demultiplexer (shown in at least figure 28 and see also above figure), comprising:

A single integrated piece (shown in at least fig. 5, illustrated as above items A, B and C) comprising an integrated section (A), second section (B), third section (C), and diffraction grating 10 (see fig. 5, wherein the first section A, the second section B, and the third section C are integrally formed as a single piece in a housing 100),

The first section A capable of receiving a WDM beam (see fig 5, item first section A containing lens assembly 86 and grating 10 for receives WDM beam via fiber 82; see also col. 13, lines 48-52),

the diffraction grating 10 integrally formed with the first section A (shown in fig. 5, item diffraction grating 10 integrally formed in the first section via housing 100), the WDM beam 88 being directed onto the internal surface of the diffraction grating 10 (shown in fig. 5, item 10 receives WDM beam), the diffraction grating/means 10 providing angularly separated beams $\lambda 1..\lambda 3$ on the external surface of the diffraction grating 10; and

the third section C positioned relative to the first section C to receive spatially separated light beams 90 of a selected diffraction order $\lambda 1..\lambda 3$ from the diffraction grating 10 (shown in fig. 5, item third section C receives spatially separated light beams of a selected diffraction order $\lambda 1..\lambda 3$ from the diffraction grating 10);

Kramer further teaches wherein the reflective surface is coated external to the first section with thin/reflective/gold film to enhance internal reflection of the WDM beam (see col. 10, line 66-col. 11, line 15).

However, Kramer, in the first embodiment, does not specifically teach wherein the above single piece a molded single piece; a reflective surface coated with a

silver/reflective film, integrally formed on the first section that directs the WDM beam received into the first section onto a bottom surface of the diffraction gating; wherein the third section includes a focusing lens that has support around it. Nevertheless, Kramer's demutiplxer have a reflective surface integrally formed on the first section that directs the WDM beam received into the first section onto a bottom surface of the diffraction gating (see fig. 18 and 19, item reflector 15 and grating 15') that the reflecting surface is coated with a reflecting coating such as gold or aluminum (see col. 9, line 66-col. 11, line 5); Kramer further states that appropriate lens assembly combinations will be apparent to those skilled in the art (see col. 16, 3rd parag.). The examiner does not give patentable weight to the limitation '**molded**' since the word 'molded' implies that the above demutliplxer was made through molding process. The device multiplxere is a product claim and what is important is the integrated product itself and how it functions not how or which process was used to make it (see MPEM 2144.04); futher, the presence of process limitations on product claims, which product does not otherwise patentably distinguish over prior art, cannot impart patentability to the product *In re Stephens,* 145 USPQ 656 (CCPA 1965). See also 2113 Product-by-Process Claims: "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior

art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product). Thus, It is well known to those of ordinary skill in the art when the invention was made to combine different embodiments of Kramer's teachings such as by replacing the grating 10 with that of double grating 250 in which item 15 functions as a reflector and use a silver coating rather than a gold or aluminum, and further, as a matter of design choice, place a lens around the support section S aperture (see above figure) of third section in order to construct a demultiplexing system that includes the above limitations, and since such coating would have essentially the same functional effect and since such demultiplexing system would provide a surface relief/aligner transmission grating with improved durability with a highly diffraction efficiency performance (col. 2, lines 21-24 and 57-62).

• The statements advanced in claims 1-6 and 12-13, above, as to the applicability and disclosure of Kramer are incorporated herein as follows:

Regarding claims 7-11 and 14-15, Kramer further teachers wherein the first section includes an integrally formed collimating lens 86 integrally formed into the single piece, the integrally formed collimating lens 86 collimating the WDM beam received from an optical fiber (shown fig. 6, item 86); further including a barrel (see fig. 5 also 10A, the barrel 183 containing fiber) integrally formed with the first section A, the barrel

capable of receiving an optical fiber and aligning the optical fiber with the collimating lens 86 (see at least fig. 5, item barrel containing/receives fiber and aligns it with the collimating lens 86); a post integrally formed into the single piece with the first section A, the post capable of receiving a barrel (shown in above figure 5 and 10a, item post in front of the barrel 183 receiving the barrel/ferrule 183); wherein the barrel includes a fiber access and a fiber stop (shown in figure 5 and 10a in which the fiber entering the ferrule/barrel 183 stopped at the aperture portion of the barrel); wherein a detector array 94 can be mounted on the support S so that the spatially separated beams $\lambda 1..\lambda 3$ are directed onto individual detectors of the detector array (see fig. 5 item photodetector array 94); wherein optical fibers are arranged to receive individual ones of the spatially separated beams (shown in at least fig. 10a, item receiving fibers in the array of fibers 186).

Regarding Claims 23, Kramer teachers a multiplexing device (shown in at least figure 5 and 28, shown above), comprising:

means for separating an input light beam 88 into constituent parts $\lambda 1..\lambda 3$ with a single piece component 10 (see fig. 5, above, first section S through grating 10 separates input beam 88 into $\lambda 1..\lambda 3$);

means 94 for detecting the constituent parts $\lambda 1..\lambda 3$ from ***the single piece*** component 10; means 100 for aligning the means for separating (see first section S) with the means for detecting 94 (see the housing 100, inherently, aligns the first section S--for separating the input light beam 88 into constituent parts $\lambda 1..\lambda 3$—with that of the detector

94; note that this alignment scheme is analogous to the applicant's aligning means—i.e., as stated in the specification parag. 0034 with regard to alignment of the elements/means in figure 2).

However, Kramer does not specifically teach wherein the above ***single piece*** is a **molded single piece**. The examiner does not give patentable weight to the process limitation '**molded**' since the process used to make the single piece does not have any bearing in the function of the demultiplexer. The arguments, regarding a piece/device being 'molded', presented in rejection of claim 1 is analogous in rejection of claim 23.

Response to Arguments and Amendment

Applicant's argument filed on 2/28/06 have been fully considered but they are not persuasive.

Regarding applicant's assertion that Kramer does not teach a single molded piece comprising an integrated first section, second section, third section, and diffraction grating. The examiner responds that Kramer teaches a single integrated piece (shown in at least fig. 5, illustrated as above items A, B and C) comprising an integrated section (A), second section (B), third section (C), and diffraction grating 10 (see fig. 5, wherein the first section A, the second section B, and the third section C are integrally formed as a single piece in a housing 100). However, Kramer does not use a molding process to make the above single piece as shown in figure 5, as also shown above. This claim is an apparatus claim and not what process was used to make the single integrated piece. The Third Section of the MPEP that the applicant is referring to

(page 7), as well as MPEP 2113 (page 8), actually affirms the examiner's standing in the issue that the above demultiplxer is entirely integrated as one single unit having a single piece that as stated above includes all contended limitations as claimed. The applicant does not provide specifically what characteristics within the claims the Kramer fails to teach since as stated above Kramer teaches all claimed limitations.

The applicant explains (pages 9-11) the process steps involved in making the Kramer's demultiplexer verses the steps involved in making the applicant's claimed invention. This is not found persuasive since as stated above the claimed invention is an apparatus and not process of making the apparatus/product.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER

May 31, 2006